Central Valley Regional Water Quality Control Board

www.waterboards.ca.gov/centralvalley

Sacramento Office: 11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670
Tel: (916) 464-3291
Fax: (916) 464-4645

Fresno Office: 1685 "E" Street
Fresno, CA 93706
Tel: (559) 445-5116
Fax: (559) 445-5910

Redding Office: 364 Knollcrest Drive, Suite 205
Redding, CA 96002
Tel: (530) 224-4845
Fax: (530) 224-4857

Our Mission…

To preserve and enhance the quality of California's water resources for the benefit of present and future generations.

Who we are

The Central Valley Regional Water Quality Control Board (CVWB) is one of nine Regional Water Boards in California. The CVWB is a regulatory Board appointed by the Governor, tasked with establishing policies and regulations to protect the quality of surface and ground waters throughout the Central Valley. The CVWB does this through adopting Total Maximum Daily Loads (TMDLs) and issuing permits and other orders to businesses, industries, public agencies and districts that conduct activities or practices that may impact or harm water quality.

Water in the Central Valley

The Central Valley is the largest and most diverse region in California, stretching from the Oregon border to the tip of Los Angeles County – about 60,000 square miles or nearly 40 percent of the state. It includes all or part of 38 of California's 58 counties and about 75 percent of the State's irrigated agricultural land. It includes the entire watersheds for the Sacramento and San Joaquin Rivers and the Tulare Lake Basin. Nearly all of the legal Sacramento/San Joaquin Delta is within the CVWB jurisdictional area.

In total, water from the Central Valley provides more than 50 percent of the State's total water supply, providing drinking water for 2/3 of the State and irrigation for millions of acres of farms in and out of the valley. Many of the waterways within the Central Valley, especially those on the valley floor, are impacted or polluted by various pollutants that pose a risk to agricultural irrigation water, drinking water, fish and wild life. These pollutants include pesticides, metals, salts, pathogens, fertilizers and industrial chemicals.

Protecting Water Quality

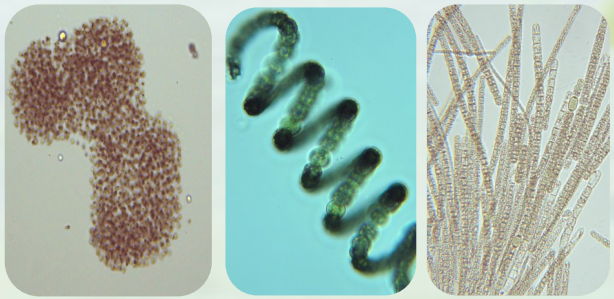
Nonpoint source (NPS) pollution is the leading cause of water quality impairment in California. Common sources of NPS pollution include runoff and erosion from land use activities related to agriculture, feedlots, grazing and dairies, timber harvest, cannabis cultivation, abandoned mines, and urban and rural development.

The CVWB's Nonpoint Source Program aims to minimize nonpoint source pollution from these land use activities and to protect unimpaired waters by assessing problem sources and implementing management programs. The NPS Program is implemented through several Water Board programs, including our 319(h) grant program, and watershed based planning efforts.

In 2016, the State Water Board launched the Freshwater Harmful Algal Bloom (HAB) Program to address a growing issue in California. The CVWB participates in the Statewide HAB Program and addresses Regional HAB concerns.

CALIFORNIA Water Boards

Cyanobacteria and Harmful Algal Blooms (HABs) In the Central Valley



Microscope images of cyanobacteria species. CVWB photos.

For any questions or to find out more information, contact the Central Valley Water Board HAB Coordinator:

Christine Joab

Tel: (916) 464-4655

Email: Christine.Joab@waterboards.ca.gov

What are cyanobacteria and harmful algal blooms?

Cyanobacteria and algae occur in freshwater and estuarine waterbodies. These organisms have been around for billions of years and are natural components of ecosystems. They perform many roles that are vital to our aquatic communities, by being a food source and producing oxygen.

Algae and cyanobacteria can produce harmful compounds, such as toxins and taste and odor compounds, that cause health risks to humans and animals. When blooms pose a risk to humans, animals, and the environment, they are referred to as harmful algal blooms (HABs).

What causes HABs?

Increased inputs of nutrients, like nitrogen and phosphorus, promote cyanobacterial growth and can lead to increased occurrences of HABs. Low flows, stagnant water, increased intensity and duration of sunlight, and high temperatures create the ideal conditions for HABs. Current research suggests that the rising temperatures and changing precipitation patterns caused by climate change are a catalyst for their growth.

What are the possible health concerns of HABs?

Cyanotoxins and algal toxins pose risks to the health and safety of people and pets, drinking water, and recreating in water bodies affected by blooms. They can also accumulate in fish and shellfish to levels posing threats to people and wildlife. Human health effects from cyanotoxins include rashes, flu like symptoms, vomiting, and seizures.

Can animals be affected?

Pets, especially dogs, are susceptible to HABs because they swallow more water while swimming and playing in the water. Animals can experience symptoms within minutes of exposure to the toxins. These symptoms include vomiting, diarrhea, weakness, difficulty breathing, and seizures. In the worst cases, animals have died. If your pet experiences these symptoms after exposure, contact your veterinarian immediately.

Clear Lake at Oak Cove HAB bloom. CVWB photo.

South Delta HAB bloom. Photo by K. Flowers.

What is the Central Valley Water Board (CVWB) doing about HABs?

Many of the CVWB's regulatory programs work to reduce nutrient inputs. In addition, the CVWB is participates in the statewide California Cyanobacteria and Harmful Bloom (CCHAB) Network. The CCHAB Network includes federal, state, and local agencies, tribes, academia, and NGOs working to develop a comprehensive coordinated program to address the causes and impacts of HABs in CA. The CVWB HAB program includes:

- Collecting information on blooms
- Sampling and analyzing HABs
- Providing information to local waterbody managers and health officers
- Conducting outreach and education

The CVWB's Nonpoint Source Unit is also working with academia and interested stakeholders to better understand the causes of HABs.

Where can I find more information?

The California Water Quality Monitoring Council created the California Harmful Algal Blooms (HABs) Portal, which is an informational resource for the public and statewide partners.

California HABs Portal

https://mywaterquality.ca.gov/habs/

CCHAB Network

https://mywaterquality.ca.gov/monitoring_council/cyanohab_network/index.html